what is claimed is:

1. A method of preparing a porous low-k dielectric material on a substrate, the method comprising:

forming a precursor film on the substrate, the precursor film comprising a porogen and a structure former; and

exposing the precursor film to ultraviolet radiation to facilitate removing the porogen from the precursor film and thereby create voids within the dielectric material to form the porous low-k dielectric material.

2. The method of claim 1, wherein the precursor film comprises a porogen and a silicon-containing structure former.

3. The method of claim 1, wherein the precursor film is formed by co-depositing the porogen with the structure former.

4. The method of claim 1, wherein the structure former is produced from at least one of a silane, an alkylsilane, an alkoxysilane and a siloxane.

5. The method of claim 4, wherein the structure former is produced from octamethylcyclotetrasiloxane (OMCTS), tetramethylcyclotetrasiloxane (TMCTS) or a combination thereof.

6. The method of claim 1, wherein the porogen comprises a polyfunctional cyclic non-aromatic compound.

7. The method of claim 6, wherein the polyfunctional cyclic non-aromatic compound is an alpha-terpinene compound.

8. The method of claim 1, wherein the porogen has ordered structure.

9. The method of claim 8, wherein the porogen comprises a mesoporous structure formed from a block copolymer.

10. The method of claim 1, wherein the porogen and structure former exist in one precursor molecule.

11. The method of claim 10, wherein the compound is an organic silane.

12. The method of claim 10, wherein the compound is di-*tert*-butyl-silane.

13. The method of claim 1, wherein the precursor film is formed by a chemical vapor deposition process.

14. The method of claim 1, wherein the precursor film is formed by a spin-on technique.

15. The method of claim 1, wherein exposing the precursor film to ultraviolet radiation takes place in an inert environment.

16. The method of claim 15, wherein the ultraviolet radiation comprises light with a wavelength at or near an absorption peak of the porogen.

17. The method of claim 15, wherein the inert environment comprises a gas selected from the group consisting of nitrogen, argon, helium and hydrogen.

18. The method of claim 15, wherein the inert environment comprises vacuum conditions.

19. The method of claim 1, wherein exposing the precursor film to ultraviolet radiation takes place in the presence of oxygen.

20. The method of claim 19, wherein the ultraviolet radiation comprises light having a wavelength that produces at least one of ozone and oxygen radicals.

21. The method of claim 1, wherein the substrate temperature during exposure to ultraviolet radiation ranges between about 25 and 450 degrees Celsius.

22. The method of claim 1, further comprising annealing the porous low-k dielectric material.

23. The method of claim 1, further comprising exposing the porous low-k dielectric material to a silanol capping agent.

24. The method of claim 23, wherein the silanol capping agent is selected from the group consisting of disilazanes, chlorosilanes, aldehydes, and combinations thereof.

25. The method of claim 23, wherein the silanol capping agent is HMDS.

26. A method of preparing a porous low-k dielectric material on a partially fabricated integrated circuit, the method comprising:

providing the partially fabricated integrated circuit to a process chamber, wherein the partially fabricated integrated circuit comprises a precursor film having a porogen and a structure former;

exposing the partially fabricated integrated circuit to ultraviolet radiation in an inert environment such that the ultraviolet radiation interacts with the porogen to produce a volatile decomposition products; and

removing the volatile decomposition products from the precursor film, leaving the porous low-k dielectric material on the partially fabricated integrated circuit.

27. The method of claim 26, wherein the ultraviolet radiation comprises wavelengths ranging between about 156 and 500 nm.

28. The method of claim 26, wherein the inert environment comprises an inert gas.

29. The method of claim 28, wherein inert gas is at least one of nitrogen, argon, helium or hydrogen gas.

30. The method of claim 26, wherein the inert environment comprises vacuum conditions.

31. The method of claim 26, further comprising:

annealing the porous low-k dielectric material; and

exposing the porous low-k dielectric material to a silanol capping agent.

32. A method of preparing a porous low-k dielectric material on a partially fabricated integrated circuit, the method comprising:

providing the partially fabricated integrated circuit to a process chamber, wherein the partially fabricated integrated circuit comprises a precursor film having a porogen and a structure former; and

exposing the partially fabricated integrated circuit to ultraviolet radiation in the presence of oxygen to produce oxidizing conditions in which the porogen is oxidized to produce porogen oxidation products, which are removed from the precursor film, leaving the porous low-k dielectric material on the partially fabricated integrated circuit.

33. The method of claim 32, wherein the ultraviolet radiation directly interacts with the porogen to produce volatile decomposition products, thereby facilitating removal of the porogen from the precursor film.

34. The method of claim 32, wherein the oxidizing conditions comprise at least one of ozone and oxygen radicals.

35. The method of claim 32, wherein the ultraviolet radiation comprises light at a wavelength that produces at least one of ozone and oxygen radicals.

36. The method of claim 35, wherein the ultraviolet radiation comprises wavelengths ranging between about 156 and 500 nm.

37. The method of claim 32, further comprising exposing the porous low-k dielectric material to a dehydroxylation agent.